AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

In the claims

Claim 1 (Currently amended): A pharmaceutical dosage ~~composition~~ comprising:

a porphyrin, and

a chemotherapeutic agent,

wherein said chemotherapeutic agent is not a polyamine, polyamine analog, cyclic polyamine, cyclic polyamine analog, dioxonaphthoquinone, or dioxonaphthoquinone derivative;

and wherein the chemotherapeutic agent is selected from the group consisting of antitumor antibiotics, doxorubicin, bleomycin, dactinomycin, daunorubicin, epirubicin, idarubicin, mitoxantrone, mitomycin, epipodophyllotoxins, etoposide, teniposide, antimicrotubule agents, vinblastine, vincristine, vindesine, vinorelbine, other vinca alkaloids, taxanes, paclitaxel (taxol), docetaxel (taxotere), nitrogen mustards, chlorambucil, cyclophosphamide, estramustine, ifosfamide, mechlorethamine, melphalan, aziridines, thiotepa, alkyl sulfonates, busulfan, nitrosoureas, carmustine, lomustine, and streptozocin, alkylators, altretamine, dacarbazine, procarbazine, temozolamide, folate analogs, methotrexate, purine analogs, fludarabine, mercaptopurine, thioguanine, adenosine analogs, cladribine, pentostatin, pyrimidine analogs, capecitabine, cytarabine, floxuridine, fluorouracil, gemcitabine, substituted ureas, hydroxyurea, camptothecin analogs, irinotecan and topotecan, topoisomerase I inhibitors, topoisomerase II inhibitors, and anthracycline antibiotics; wherein the porphyrin is covalently linked to the chemotherapeutic agent;

and all salts, hydrates, and stereoisomers thereof;

wherein the porphyrin-chemotherapeutic agent retains the chemotherapeutic effect of the chemotherapeutic agent in unconjugated form, and the dosage of the porphyrin-chemotherapeutic agent has reduced toxicity compared to the chemotherapeutic agent in unconjugated form.

Claim 2 (Canceled)

Claim 3 (Previously presented): The composition of claim 1, wherein the porphyrin is covalently linked to the chemotherapeutic agent via a linking group.

Claim 4 (Previously presented): The composition of claim 1, wherein the porphyrin is selected from the group consisting of mesoporphyrins, deuteroporphyrins, hematoporphyrins, protoporhyrins, uroporphyrins, coproporphyrins, cytoporphyrins, rhodoporphyrin, pyrroporphyrin, etioporphyrins, phylloporphyrins, heptacarboxyporphyrins, hexacarboxyporphyrins, pentacarboxyporphyrins, and other alkylcarboxyporphyrins; and derivatives thereof.

Claim 5 (Previously presented): The composition of claim 4, wherein the porphyrin is selected from the group consisting of derivatives of deuteroporphyrins.

Claim 6 (Previously presented): The composition of claim 5, wherein the porphyrin is selected from the group consisting of sulfonic acid derivatives of deuteroporphyrins.

Claim 7 (Previously presented): The composition of claim 4, wherein the porphyrin is a mesoporphyrin.

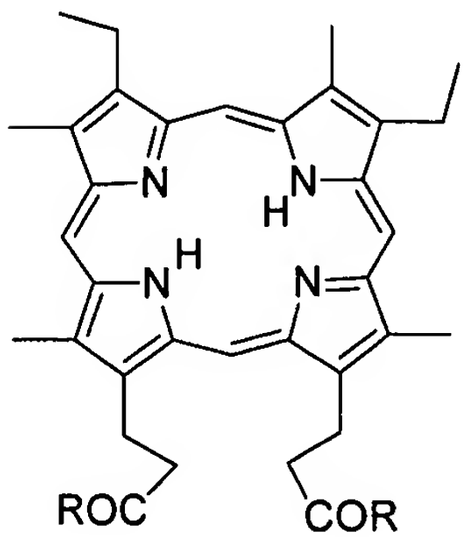
Claim 8 (Previously presented): The composition of claim 7, wherein the porphyrin is mesoporphyrin IX.

Claim 9 (Canceled)

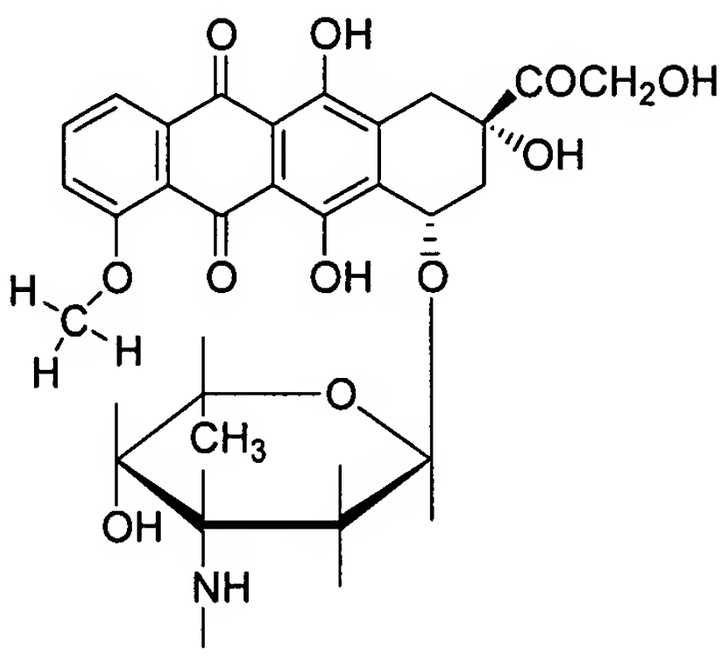
Claim 10 (Previously presented): The composition of claim 1, wherein the chemotherapeutic agent is doxorubicin.

Claim 11 (Previously presented): The composition of claim 1, wherein the chemotherapeutic agent is doxorubicin and the porphyrin is mesoporphyrin IX.

Claim 12 (Previously presented): The composition of claim 11 of the structure:



wherein R is



Claim 13 (Previously presented): A method of treating a disease characterized by uncontrolled cell proliferation, wherein the method comprises administering a therapeutically effective amount of a composition of claim 1.

Claim 14 (Original): The method of claim 13, wherein the disease is cancer.

Claim 15 (Previously presented): A method of treating a disease characterized by uncontrolled cell proliferation, wherein the method comprises administering a therapeutically effective amount of the composition of claim 10.

Claim 16 (Previously presented): A method of making a composition of claim 1, comprising forming a covalent bond between a porphyrin and a chemotherapeutic agent.

Claim 17 (Previously presented): A method of making the composition of claim 12, comprising reacting doxorubicin with mesoporphyrin IX in the presence of a reagent that causes an amide bond to form, said amide bond form by reaction of a mesoporphyrin carboxyl group and a doxorubicin amino group.

Claim 18 (Previously presented): The method of claim 17, wherein the reagent that causes an amide bond to form is selected from the group consisting of uronium and phosphonium reagents and carbodiimides.

Claim 19 (Previously presented): A method of treating a disease characterized by uncontrolled cell proliferation, wherein the method comprises administering a therapeutically effective amount of a composition of claim 12.

Claim 20 (Previously presented): The method of claim 19, wherein the disease is cancer.

Claim 21 (Previously presented): A method of treating cancer, comprising administering a therapeutically effective amount of a composition of claim 1 via oral administration.

Claim 22 (Previously presented): A method of treating cancer, comprising administering a therapeutically effective amount of a composition of claim 10 via oral administration.

Claim 23 (Previously presented): A method of treating cancer, comprising administering a therapeutically effective amount of a composition of claim 12 via oral administration.

Claim 24 (Previously presented): A method of treating cancer, comprising administering a therapeutically effective amount of a composition of claim 1 via subcutaneous administration.

Claim 25 (Previously presented): A method of treating cancer, comprising administering a therapeutically effective amount of a composition of claim 10 via subcutaneous administration.

Claim 26 (Previously presented): A method of treating cancer, comprising administering a therapeutically effective amount of a composition of claim 12 via subcutaneous administration.

Claim 27 (Previously presented): A method of treating cancer, comprising administering a therapeutically effective amount of a composition of claim 1 via intraperitoneal administration.

Claim 28 (Previously presented): A method of treating cancer, comprising administering a therapeutically effective amount of a composition of claim 10 via intraperitoneal administration.

Claim 29 (Previously presented): A method of treating cancer, comprising administering a therapeutically effective amount of a composition of claim 12 via intraperitoneal administration.

Claim 30 (Previously presented): A method of treating cancer, comprising administering a therapeutically effective amount of a composition of claim 1 via intravenous administration.

Claim 31 (Previously presented): A method of treating cancer, comprising administering a therapeutically effective amount of a composition of claim 10 via intravenous administration.

Claim 32 (Previously presented): A method of treating cancer, comprising administering a therapeutically effective amount of a composition of claim 12 via intravenous administration.

Claim 33 (Previously presented): A composition comprising the composition of claim 12, formulated for oral administration.